NASA's Multi-Vehicle (m:N) Control Working Group: Nov 2022 F2F Summary

Garrett Sadler

NASA Ames Research Center

Tuesday, January 24, 2023

At a Glance: November 2022 Face-to-Face

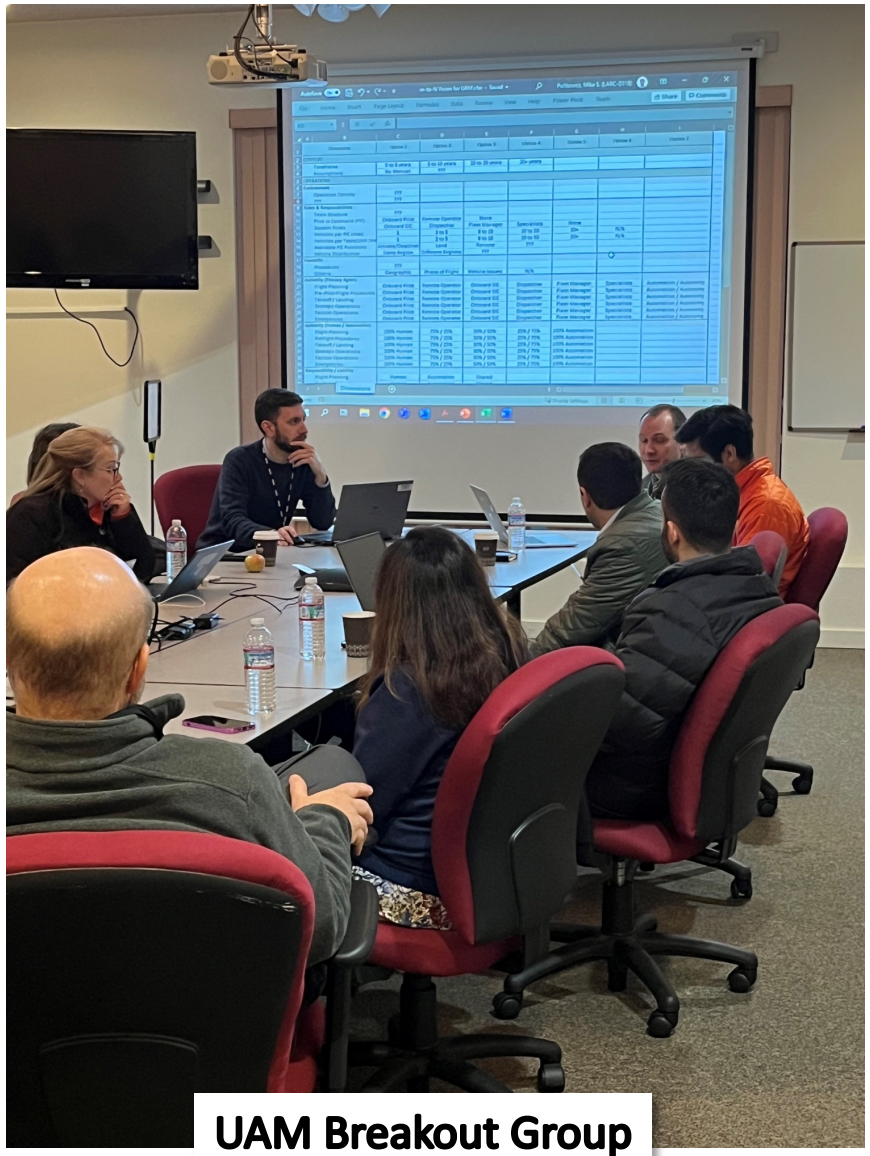
- Meeting held at NASA Ames Research Center on November 29-30, 2022

- 128 Registrants
  - Representation from
    - 63: Government (NASA, DoD, FAA, Transport Canada)
    - 59: Industry (Boeing, Collins, Honeywell, Nuro, Wisk, Joby, Zipline, Reliable Robotics, many more…)
    - 6: Academia (Purdue, Old Dominion, Oregon State, Oklahoma State, CSU Long Beach, Cornell)

- Attendance: ~60 in-person, ~50 online

- Program details:
  - Eight individual talks
  - Two panels
  - Breakout groups
    - Large UAS
    - Small UAS
    - UAM
    - HAPS

Breakout Group Activity



UAM Breakout Group

Broke into groups by domain:

- Small UAS
- Large UAS
- Urban Air Mobility
- High Altitude Platform Systems

Breakout Assignment:

- Goal: define “Vision” of the near- and far-term for each domain’s use case/concept of operation

- What does the *mature* use-case look like?
  - Example items considered: m:N Ratio, Role of Human, Ops Environment, Assumptions, Functions, Technologies, Capabilities, Timeline, etc.

- What are your Use-Case Goals?
  - Capabilities/Functions needed to enable your CONOP
  - Technologies Enabling Functions – TRL – Prototype to Ops Maturity

Next Steps

- Each subsection of the WG conducting virtual meetings
  - Refine and iterate on use case vision from November meeting
  - Present report at May Face-to-Face

- Next Face-to-Face meeting of the NASA m:N Working Group:
  - AUVSI Xponential 2023
  - May 8-11, 2023
  - Colorado Convention Center
  - Denver, CO